Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Original) An apparatus comprising:

a configuration storage storing configuration settings to configure an access transaction generated by a processor having a normal execution mode and an isolated execution mode, the configuration settings including a plurality of subsystem memory range settings, the access transaction including access information; and

a multi-memory zone access checking circuit coupled to the configuration storage to check the access transaction using at least one of the configuration settings and the access information, the multi-memory zone access checking circuit generating an access grant signal if the access transaction is valid.

Claim 2. (Original) The apparatus of claim 1 wherein the access information includes a physical address.

Claim 3. (Original) The apparatus of claim 2 wherein the configuration storage further comprises a process control register storing an execution mode word, the execution mode word being asserted as an execution mode signal when the processor is configured in the isolated execution mode.

Claim 4. (Original) The apparatus of claim 3 wherein the configuration settings include a memory mask value, a memory base value, and a memory length value, a combination of at least two of the mask, base, and length values to define an isolated memory area in a memory external to the processor, the isolated memory area being accessible to the processor in the isolated execution mode.

Claim 5. (Original) The apparatus of claim 3 wherein each subsystem memory range setting corresponds to a memory zone for a subsystem in an isolated memory area in a memory external to the processor.

Claim 6. (Original) The apparatus of claim 5 wherein each subsystem memory range setting includes a subsystem memory mask value, a subsystem memory base value, and a subsystem memory length value, a combination of at lease two of the subsystem mask, base, and length values to define a memory zone in the isolated memory area for the subsystem.

Claim 7. (Original) The apparatus of claim 6 wherein an ID value for each subsystem identifies each subsystem and the subsystem's associated memory zone as defined by the subsystem memory range setting.

Claim 8. (Original) The apparatus of claim 6 wherein the multi-memory zone access checking circuit comprises a subsystem address detector to detect if the physical address is within a currently active subsystem's associated memory zone as defined by the subsystem memory range setting for the subsystem, the subsystem address detector generating a subsystem address matching signal.

Claim 9. (Original) The apparatus of claim 8 wherein the multi-memory zone access checking circuit further comprises an access grant generator coupled to the subsystem address detector and the processor control register, the access grant generator generating an access grant signal if both the subsystem address matching signal and the execution mode word signal are asserted.

Claim 10. (Original) A method comprising:

configuring an access transaction generated by a processor having a normal execution mode and an isolated execution mode using a configuration storage storing configuration settings, the configuration settings including a plurality of subsystem memory range settings, the access transaction including access information;

checking the access transaction by a multi-memory zone access checking circuit using at least one of the configuration settings and the access information; and

generating an access grant signal if the access transaction is valid.

Claim 11. (Original) The method of claim 10 wherein the access information includes a physical address.

Claim 12. (Original) The method of claim 11 wherein the configuration storage comprises a process control register storing an execution mode word, the execution mode word being asserted as an execution mode signal when the processor is configured in the isolated execution mode.

Claim 13. (Original) The method of claim 12 wherein the configuration settings include a memory mask value, a memory base value, and a memory length value, a combination of at least two of the mask, base, and length values to define an isolated memory area in a memory external to the processor, the isolated memory area being accessible to the processor in the isolated execution mode.

Claim 14. (Original) The method of claim 12 wherein each subsystem memory range setting corresponds to a memory zone for a subsystem in an isolated memory area in a memory external to the processor.

Claim 15. (Original) The method of claim 14 wherein each subsystem memory range setting includes a subsystem memory mask value, a subsystem memory base value, and a subsystem memory length value, a combination of at lease two of the subsystem mask, base, and length values to define a memory zone in the isolated memory area for the subsystem.

Claim 16. (Original) The method of claim 15 wherein configuring the access transaction further comprises storing an ID value for each subsystem to identify each subsystem and the subsystem's associated memory zone as defined by the subsystem memory range setting.

Claim 17. (Original) The method of claim 15 wherein checking the access transaction comprises detecting if the physical address is within a currently active subsystem's associated memory zone as defined by the subsystem memory range setting for the subsystem by a subsystem address detector, the subsystem address detector generating a subsystem address matching signal.

Claim 18. (Original) The method of claim 17 wherein generating an access grant signal if the access transaction is valid comprises generating an access grant signal by an

access grant generator if both the subsystem address matching signal and the execution mode word signal are asserted.

Claims 19-36. (Canceled)